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# *INDIANA* **Epidemiology** *NEWSLETTER*

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Epidemiology Resource Center  
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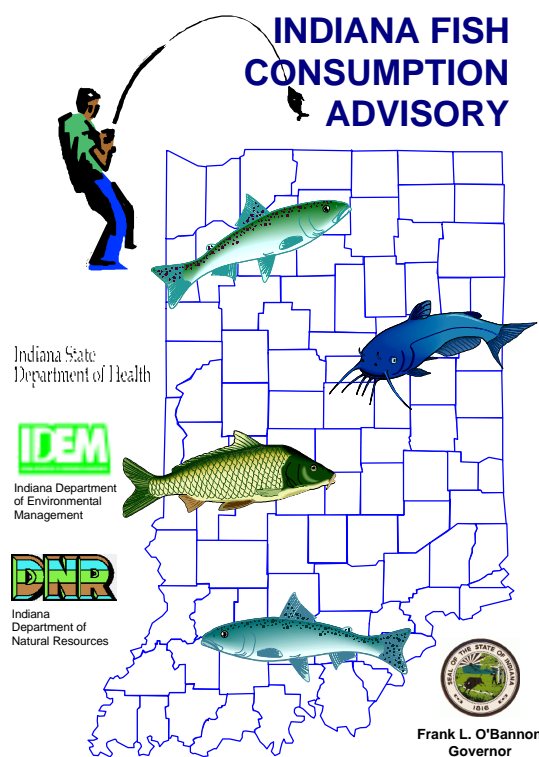
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## **Indiana Fish Consumption Advisory**

Mario Sgro, MS  
ISDH Epidemiology Resource Center

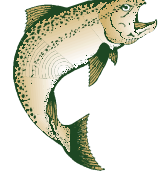
Each year since 1972, three state agencies have collaborated to create the *Indiana Fish Consumption Advisory*. These state agencies include the Department of Natural Resources (DNR), the Indiana Department of Environmental Management (IDEM), and the Indiana State Department of Health (ISDH). The *Indiana Fish Consumption Advisory*, published annually by the ISDH, provides Hoosier anglers with health information about eating sport-caught fish from Indiana waters. Each state agency plays a role in this endeavor. The DNR promotes the advisory in their annual Fishing Guide. Every licensed angler in the state receives a copy of the DNR Fishing Guide. IDEM collects fish from across the state to test for environmental contaminants. Using a risk-based approach, ISDH interprets these data provided by IDEM and publishes the advisory. The ISDH is the ultimate authority in issuing an advisory.

The 2000 *Indiana Fish Consumption Advisory* is based on levels of polychlorinated biphenyls (PCBs) and mercury found in fish tissue. PCBs are synthetic oils once widely used in electrical transformers and capacitors. Though banned for use by the federal government in the 1970s, PCBs are still found in the environment today because they break down very slowly. Based on cancer studies involving laboratory animals, the US Department of Health and Human Services has stated that PCBs may reasonably be anticipated to be carcinogens. Mercury is a naturally occurring metal that does not break down. Instead, it recycles between land, water, and air. The primary source of mercury air deposition, however, is believed to be from coal-fired power plants and from burning household and industrial waste. Excessive exposure to mercury, particularly in its methylated form, can lead to developmental problems during fetal growth and childhood.





PCBs and mercury readily accumulate in organic tissue. Once introduced to the aquatic environment, they move up the food chain and bioaccumulate in larger organisms like fish. Typically, PCBs bind to fatty tissue while mercury binds to muscle tissue. Data collected by IDEM often show that omnivorous bottom feeding fish like carp and catfish have more PCBs than leaner, predatory fish like largemouth bass. However, largemouth bass often have higher levels of mercury in their tissue than carp or catfish. In general, older and larger fish have more contaminants than younger, smaller fish.



The *Indiana Fish Consumption Advisory* recommendations for consumption of sport-caught fish range from "unlimited consumption" to "do not eat" for adult males and females. More restrictive consumption limits are recommended for sensitive populations. Sensitive populations are identified as women who are pregnant or breastfeeding, women who plan to have children, and children under 15 years of age. A woman's exposure before pregnancy also matters; therefore, women should follow the advisory for several years before pregnancy. If PCBs or mercury have built up over time from prolonged exposure, it can take several years for the body to rid itself of the contaminant.

The goal of the *Indiana Fish Consumption Advisory* is not to discourage the consumption of fish, but to offer guidance when choosing to eat sport-caught fish from Indiana waters. Fish is a good source of protein that is low in saturated fat. Research suggests consuming one-half pound of fish per week is beneficial in preventing heart disease. Therefore, it is important to gain the benefits of eating fish while minimizing the potential risk. Eating sport-caught fish in moderation, by following the recommendations in the *Indiana Fish Consumption Advisory*, will allow you to gain the benefits of eating fish while avoiding potential long-term health risks.

You can reduce your risk by following some additional guidelines:

1. Be selective about the locations where you catch fish. Choose areas where lower levels of contaminants are found in fish.
2. Keep the small fish. Data show that younger, smaller fish have less contaminants than older, larger fish.
3. Eat smaller fish meals. When you eat large fish, eat small servings. Freeze the rest and eat it over time.
4. Clean and cook fish properly. A substantial amount of fat is found under the skin of fish. Properly removing this fat can reduce the level of PCBs that may be present. Broiling, baking, or grilling fish so that fat drips away also reduces PCB levels.

The ISDH Environmental Epidemiology Section (EES) promotes the Indiana Fish Consumption Advisory through several different efforts. These efforts include direct mailings to citizens, local health departments, WIC clinics, state parks, state forests, fishery biologists, lake management districts, and solid and hazardous waste districts. In recent years, the EES has displayed Fish Consumption Advisory information at the Indiana State Fair and Minority Health Fair. Additional outreach materials were created by the EES to disseminate information about the advisory. These materials include the Expectant Mother's Guide brochures, Fish Advisory posters, and Fish Advisory magnets.

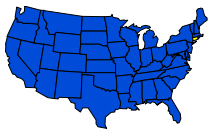
Information on the Indiana Fish Consumption Advisory is available by calling the ISDH Environmental Epidemiology Section at (317) 233-7808. In addition to the annually published booklet, the 1999 Fish Consumption Advisory is available on the ISDH web site at [www.state.in.us/isdh](http://www.state.in.us/isdh) (click on Data and Statistics). The 2000 Fish Consumption Advisory should be available on the web site soon.

# The Influenza Pandemic is Coming...Are You Ready?

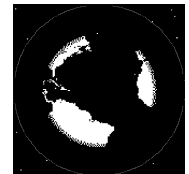
Stephanie Fang, RN, BSN  
ISDH Communicable Disease

During the next influenza pandemic, 80,000 to 300,000 people will die in the United States according to Centers for Disease Control and Prevention (CDC) estimates. This could include 1,760 to 6,600 deaths in Indiana.

Historically, influenza pandemics have occurred every 10-30 years, and it has been more than 30 years since the last pandemic. Influenza pandemics have occurred periodically for over 300 years. Many experts consider influenza pandemics inevitable--yet, no one knows when the next one will occur.



Three major pandemics have occurred this century. In 1918-1919, the “Spanish Flu”, H1N1 strain, caused more than 500,000 deaths in the United States (more than all the wars in the 20<sup>th</sup> century) and more than 20 million deaths worldwide. In 1957-1958, the “Asian Flu” (H2N2 strain) killed 70,000 in the U.S., and in 1968-1969, the “Hong Kong Flu” (H3N2 strain) killed 36,000.



## Influenza Viruses

Three types of influenza viruses affect people each year. Some cause major illness and disease, while others can be asymptomatic or cause only mild illness.

*Type A* infections are usually the most severe and are often associated with epidemics and pandemics. *Type B* infections are of mild to moderate severity, but can be associated with epidemics. *Type C* infections are very mild and may cause minor respiratory illness or no symptoms. Type C infections are not associated with epidemics. Therefore, efforts to control the impact of influenza are aimed at types A and B because of the severe public health threat they pose.

Influenza viruses continually undergo frequent genetic mutations (antigenic drift). These changes enable the virus to evade the immune system causing people to remain susceptible to influenza virus infection. For this reason, a new vaccine must be developed annually to match the new circulating strains.

Every 20-30 years, type A viruses undergo a major genetic change (antigenic shift), which are associated with epidemics and pandemics. An antigenic shift can lead to a pandemic if it results in the emergence of a new virus (novel virus) to which the overall population has no immunity.

## Preparation for the Next Pandemic

Most experts believe that we will have between one and six months from the time that a novel influenza strain is identified to the time that outbreaks begin to occur in the U.S. The effect on our local communities will be relatively prolonged, weeks-to-months, when compared to minutes-to-hours as observed in most other natural disasters.

During the next pandemic, it can reasonably be expected that:

- Effective preventive and therapeutic measures, including vaccines and antiviral agents, will be in short supply;
- Existing medical facilities may be quickly overwhelmed, requiring the use of non-traditional medical settings;
- Widespread illness in the community will likely result in significant shortages of personnel in critical community services: healthcare workers, first responders, military personnel, police, firemen, etc.

## Influenza Plan: A Work In Progress

In 1993, a national working group on influenza pandemic preparedness and emergency response created a comprehensive conceptual "Influenza Pandemic Preparedness Plan" that outlined critical areas that need to be addressed to minimize the burden of a pandemic. Draft state and local guidelines were developed by January 1997 and 5 states (Connecticut, Missouri, Maine, New Mexico, and New York) were selected to pilot test the draft guidelines. In 1998, the conceptual plan became the framework for enhancing pandemic preparedness efforts at the national and state level. Indiana, along with Florida, New Hampshire, New Jersey, and Massachusetts were the second group of states selected to develop state plans.

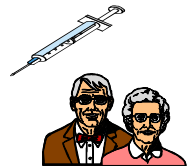
The key objectives for Indiana's influenza pandemic planning process will be to:

- Develop a state and local plan in conjunction with our Bioterrorism plan;
- Ensure that all relevant organizations in the public and private sectors actively participate in the planning process;
- Build collaborative networks between the public health and emergency response communities;
- Understand relationships, responsibilities, and communication frameworks among various organizations at the national, state, and local levels;
- Focus on actions that are most crucial to effective planning, response, and mitigation at the state and local level.

In this early phase of the planning process, we are taking into consideration that each jurisdiction must assume responsibility for deciding how specific aspects of the plan are actually implemented. Also, note that a number of actions taken by state and local agencies will be contingent upon the development of national policies and procedures, many of which are presently under development.



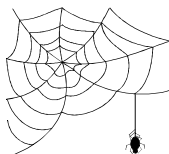
Research to better understand the evolution of influenza viruses, their complex epidemiology, and vaccine/antiviral interventions are a priority in preparing for the next pandemic. Implementation of new strategies to enhance adult immunization against influenza and pneumococcus will provide much of the needed infrastructure to deliver immunoprophylaxis in the event of a pandemic.



### **“Hepatitis C: What Clinicians and Other Professionals Need to Know”**

an interactive web-based training to be launched on the Centers for Disease Control and Prevention (CDC), Hepatitis Branch web site <http://www.cdc.gov/hepatitis> - effective May 15, 2000

“Hepatitis C: What Clinicians and Other Professionals Need to Know” is an interactive web-based training program. This program provides users with up-to-date information on the epidemiology, diagnosis, and management of HCV infection and HCV-related chronic disease. Users can also test their knowledge of the material through study questions at the end of each section and case studies at the end of the program. This web-based training program provides a valuable educational tool to assist health professionals in preventing and managing HCV infection and HCV-related chronic disease by combining up-to-date clinical and epidemiological information with state of the art technology and graphics designed to enhance both the user's understanding of the material and the appearance of the program. Continuing medical and nursing education credits are available free of charge from the CDC upon completion of the training. The American Academy of Family Physicians will also grant their educational credits upon completion of training and filing with the Academy.



## Wonderful Wide Web Sites

### ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

<http://www.state.in.us/isdh/> (under Data and Statistics)

Indiana Cancer Incidence Report (1990, 95)	Indiana Mortality Report (1995, 97)
Indiana Cancer Mortality Report (1990-1994)	Indiana Natality Report (1995, 96, 97)
Indiana Health Behavior Risk Factors (1995-96, 97, 98)	Indiana Natality/Induced Termination of Pregnancy/Marriage Report (1998)
Indiana Hospital Consumer Guide (1996)	Indiana Report of Diseases of Public Health Interest (1997, 98)
Indiana Marriage Report (1995, 96, 97)	

The following site allows access to the web page for any state health department in the United States:

<http://www.polsci.wvu.edu/grad/klase/STATEHEALTH/sthlth.html>

## HIV Disease Summary

Information as of April 30, 2000 (population 5,840,528).

### HIV - without AIDS to date:

252	New cases from May 1999 thru April 2000	12-month incidence:	4.32 cases/100,000
3,166	Total HIV-positive, without AIDS on April 30, 2000 <sup>1</sup>	Point prevalence:	54.21 cases/100,000 <sup>1</sup>

### AIDS cases to date:

306	New AIDS cases from May 1999 thru April 2000	12-month incidence:	5.24 cases/100,000
2,523	Total AIDS cases on April 30, 2000 <sup>1</sup>	Point prevalence:	43.20 cases/100,000 <sup>1</sup>
5,821	Total AIDS cases, cumulative (alive and dead)		

<sup>1</sup> Counting only cases alive in April 2000

## **REPORTED CASES** of selected notifiable diseases

Disease	Cases Reported in April		Cumulative Cases Reported through April	
	1999	2000	1999	2000
Campylobacteriosis	33	24	94	64
<i>E. coli</i> O157:H7	3	8	12	10
Giardiasis	34	32	95	129
Hepatitis A	11	4	44	14
Hepatitis B	1	10	8	15
Legionellosis	2	2	7	9
Lyme Disease	0	0	1	0
Meningococcal, invasive	9	2	18	20
Pertussis	0	4	8	12
Rocky Mountain Spotted Fever	0	0	0	0
Salmonellosis	45	47	92	124
Shigellosis	4	63	24	126
Tuberculosis	12	10	39	47
Animal Rabies	0	0	0	0

**For information on reporting of communicable diseases in Indiana, call the *ISDH Communicable Disease Division* at (317) 233-7665.**

**Indiana**  
***Epidemiology***  
**Newsletter**

The *Indiana Epidemiology Newsletter* is published by the Indiana State Department of Health to provide epidemiologic information to Indiana health professionals and to the public health community.

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